IN THE SPECIFICATION:

Please amend the specification as follows:

Please substitute the paragraph beginning at page 5, line 17, and ending on page 6, line 19, with the following.

-- According to the experiments by the present inventors, the wavelength of a laser beam is unstable and drifts immediately after the start of laser oscillation or at several ten to several hundred pulses from the start of a burst in burst oscillation, and the drift amount changes depending on the laser oscillation history or the internal environment of a wavelength-measurement unit in a laser oscillation apparatus. The oscillation history includes the wavelength change width, the ~~lapse~~ elapsed time after the stop of oscillation and the oscillation duty (the ratio of oscillation time/idle time). The internal environment of the wavelength measurement unit includes the atmospheric pressure and temperature. A laser oscillation apparatus of the present invention more preferably incorporates one or both of an oscillation history of a laser beam and an internal wavelength measurement unit environment of the wavelength measurement unit. The drift amount of the wavelength measurement unit in the laser oscillation apparatus is calculated by using at least one of the oscillation history stored in the oscillation history memory means and the measurement result of the internal wavelength measurement unit environment measurement means. A wavelength adjustment means is preferably driven and controlled in consideration of the calculation result so as to oscillate a laser beam with a wavelength falling within a predetermined allowable range of a target wavelength. --

Please substitute the paragraph beginning at page 6, line 20, and ending on page 7, line 8, with the following.

-- It is difficult to adjust the wavelength immediately after the start of oscillation to a desired range when the laser oscillation idle time is long or the wavelength change amount is very large. It may also become difficult to determine whether the laser oscillation apparatus normally oscillates a laser beam with a desired allowable range. Thus, a desirable form of the laser oscillation apparatus according to the present invention adopts a wavelength lock signal transmission function of transmitting a signal used to determine whether the oscillation wavelength falls within a predetermined allowable range. A threshold is set for one or both of the oscillation wavelength change amount and the ~~lapse~~ elapsed time after the stop of oscillation. The state of the wavelength lock signal is determined based on the threshold. --

A1 cont'd

Please substitute the paragraph beginning at page 12, line 22, and ending on page 13, line 12, with the following.

-- The laser source 2 transmits a wavelength lock signal to the main controller 16. This signal is ON when an actual oscillation wavelength falls within a predetermined allowable range of a target oscillation wavelength value, and is otherwise OFF. When the wavelength lock signal is ON, the oscillation wavelength falls within the predetermined allowable range of the target value, and thus wafer exposure can immediately start without opening/closing operation of a shutter in the laser source 2 or test emission. When the wavelength lock signal is OFF, the main controller 16 does not expose the wafer 14, closes the shutter arranged at the exit port of the laser

A2

a2 contd.

source 2, and performs test emission in order to make the oscillation wavelength fall within the predetermined allowable range. After the oscillation wavelength falls within the predetermined allowable range, the main controller 16 can open the shutter to start exposure again. --

Please substitute the paragraph beginning at page 17, line 16, with the following.

A3

-- Fig. 3A shows data representing oscillation wavelength stability for oscillation idle times a and b ($a < b$) between the end of oscillation and the restart of oscillation. For the longer oscillation idle time b, the error amount with respect to the target oscillation value is larger between a restart of oscillation after the idle time and oscillation of several ~~ten~~ tens of pulses. --

Please substitute the paragraph beginning at page 17, line 23, and ending on page 18, line 4, with the following.

-- Fig. 3B shows data representing oscillation wavelength stability at oscillation duties c and d ($c < d$) before an idle time when the oscillation idle time is constant between the end of oscillation and the restart of oscillation. For the higher oscillation duty d before the idle time, the error amount with respect to the target oscillation value is larger between the restart of oscillation after the idle time and oscillation of several ~~ten~~ tens of pulses. --

Please substitute the paragraph beginning at page 19, line 1, with the following.

A4

-- An example of prediction/calculation of the oscillation wavelength drift amount can be approximately given by

$$\Delta\lambda = F(\lambda exc.) + A(1 - \exp(-Bt)) + C + D \qquad (1)$$

where $\Delta\lambda$: oscillation wavelength drift amount

$F(\lambda exc.)$: wavelength amount error dependent on the oscillation wavelength change amount

A, B: coefficients (dependent on the oscillation duty and oscillation wavelength)

A4 cont'd

t: oscillation idle time

C: chirping

D: drift amount of the light monitoring unit. --

Please substitute the paragraph beginning at page 22, line 2, with the following.

A5

-- A job of the exposure apparatus starts (step 501), and the barometer 15 measures the atmospheric pressure at a wafer loading timing (step 502). The main controller 16 calculates a target oscillation wavelength value (step 503), and transmits it to the laser source 2 (step 504). The laser controller 201 of the laser source 2 calculates an oscillation wavelength change amount (step 505), drives the stepping motor 212 without emitting any test laser beam, and adjusts the wavelength selection element such as a grating or an etalon in the band narrowing module 211 so as to oscillate the laser beam with a desired oscillation wavelength (step 506). --

Please substitute the paragraph beginning at page 25, line 13, with the following.

A6

-- A production system for producing a semiconductor device (e.g., a semiconductor chip such as an IC or LSI, liquid crystal panel, CCD, thin-film magnetic head, micromachine, or the like) using the apparatus according to the present invention will be exemplified. A trouble

remedy or periodic maintenance of a manufacturing apparatus installed in a semiconductor manufacturing factory, or maintenance service such as software distribution is performed by using a computer network outside the manufacturing factory. --

a6 cont'd.

Please substitute the paragraph beginning at page 25, line 23, and ending on page 26, line 19, with the following.

-- Fig. 7 shows the overall system cut out at a given angle. In Fig. 7, reference numeral 101 denotes a business office of a vendor (apparatus supply manufacturer) which provides a semiconductor device manufacturing apparatus. Assumed examples of the manufacturing apparatus are semiconductor manufacturing apparatuses for performing various processes used in a semiconductor manufacturing factory, such as pre-process apparatuses (e.g., a lithography apparatus including an exposure apparatus, a resist processing apparatus, and an etching apparatus, an annealing apparatus, a film formation apparatus, a planarization apparatus, and the like) and post-process apparatuses (e.g., an assembly apparatus, an inspection apparatus, and the like). The business office 101 comprises a host management system 108 for providing a maintenance database for the manufacturing apparatus, a plurality of operation terminal computers 110, and a LAN (Local Area Network) 109, which connects the host management system 108 and computers 110 to build an intranet. The host management system 108 has a gateway for connecting the LAN 109 to Internet 105 as an external network of the business office, and a security function for limiting external accesses. --

Please substitute the paragraph beginning at page 26, line 20, and ending on page 27, line 8, with the following.

a6

-- Reference numerals 102 to 104 denote manufacturing factories of the semiconductor manufacturer as users of manufacturing apparatuses. The manufacturing factories 102 to 104 may belong to different manufacturers or the same manufacturer (e.g., a pre-process factory, a post-process factory, and the like). Each of the factories 102 to 104 is equipped with a plurality of manufacturing apparatuses 106, a LAN (Local Area Network) 111, which connects these apparatuses 106 to build an intranet, and a host management system 107 serving as a monitoring apparatus for monitoring the operation status of each manufacturing apparatus 106. The host management system 107 in each of the factories 102 to 104 has a gateway for connecting the LAN 111 in the factory to the Internet 105 as an external network of the factory. --

Please substitute the paragraph beginning at page 27, line 23, and ending on page 28, line 7, with the following.

a7

-- Data communication between the factories 102 to 104 and the vendor 101 and data communication via the LAN 111 in each factory adopt a communication protocol (TCP/IP) generally used in the Internet. Instead of using the Internet as an external network of the factory, a dedicated network (e.g., an ISDN) having high security, which inhibits access of a third party can be adopted. Also, the user may construct a database in addition to the one provided by the vendor and set the database on an external network, and the host management system may authorize access to the database from a plurality of user factories. --

Please substitute the paragraph beginning at page 28, line 24, and ending on page 29, line 8, with the following.

A8

-- In Fig. 8, reference numeral 301 denotes a manufacturing factory of a manufacturing apparatus user (e.g., a semiconductor device manufacturer) where manufacturing apparatuses for performing various processes, e.g., an exposure apparatus 302, a resist processing apparatus 303, and a film formation apparatus 304 are installed in the manufacturing line of the factory. Fig. 8 shows only one manufacturing factory 301, but a plurality of factories are networked in practice. The respective apparatuses in the factory are connected to a LAN 306 to build an intranet, and a host management system 305 manages the operation of the manufacturing line. --

Please substitute the paragraph beginning at page 29, line 9, and ending on page 30, line 2, with the following.

-- The business office vendors (e.g., apparatus supply manufacturers) such as an exposure apparatus manufacturer 310, a resist processing apparatus manufacturer 320, and a film formation apparatus manufacturer 330 comprise hose management system 311, 321, and 331 for executing remote maintenance for the supplied apparatuses. Each host management system has a maintenance database and a gateway for an external network, as described above. The host management system 305 for managing the apparatuses in the manufacturing factory of the user, and the management systems 311, 321, and 331 of the vendors for the respective apparatuses are connected via the Internet or dedicated network serving as an external network 300. If a trouble occurs in any one of a series of manufacturing apparatuses along the manufacturing line in this

system, the operation of the manufacturing line stops. This trouble can be quickly solved by remote maintenance from the vendor of the apparatus in trouble via the Internet 300. This can minimize the ~~stop~~ stoppage of the manufacturing line. --

A8 cont'd.

Please substitute the paragraph beginning at page 30, line 3, with the following.

-- Each manufacturing apparatus in the semiconductor manufacturing factory comprises a display, a network interface, and a computer for executing network access software and apparatus operating software, which are stored in a storage device. --

Please substitute the paragraph beginning at page 32, line 16, and ending on page 33, line 4, with the following.

A9

-- In step 15 (resist processing), a photosensitive agent is supplied to the wafer. In step 16 (exposure), the above-mentioned exposure apparatus exposes the wafer to the circuit pattern of a mask. In step 17 (developing), the exposed wafer is developed. In step 18 (etching), the resist is etched except for the developed resist image. In step 19 (resist removal), an unnecessary resist after etching is removed. These steps are repeated to form multiple circuit patterns on the wafer. A manufacturing apparatus used in each step undergoes maintenance by the remote maintenance system, which prevents ~~a~~ trouble in advance. Even if ~~a~~ trouble occurs, the manufacturing apparatus can be quickly recovered. The productivity of the semiconductor device can be increased in comparison with the prior art. --